

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-10. (Canceled)

11. (Previously presented) A method for managing devices, the method comprising:
receiving a request implemented via at least one device independent class;
traversing a class hierarchy database to determine at least one device specific class that corresponds to the at least one device independent class, wherein the class hierarchy database stores a class hierarchy and associations between classes;
modifying the received request, wherein in the modified request the least one device independent class has been translated to the at least one device specific class;
generating a device specific request in a device specific language; and
sending the device specific request in the device specific language to a managed device, wherein

(i) in the class hierarchy database, a first base class at a higher level in the class hierarchy is connected to a second base class and a third base class that are at a lower level in the class hierarchy, wherein the second and third base classes are connected via a base association;

(ii) in the class hierarchy database, the second base class is connected to a first specific class that corresponds to the first base class, the third base class is connected to a second specific class that corresponds to the second base class, wherein the first specific class and the second specific class are connected by a specific association;

(iii) in response to a request for specific association instances based on providing a source class corresponding to the second base class and a requested class corresponding to the third base class, deriving one class supported by the managed device via the specific association.

12. (Previously presented) The method of claim 11, further comprising:
mapping at least one device independent class attribute to at least one device specific class attribute in the modified request;

mapping at least one device independent property to at least one device specific property in the modified request;

generating the device specific request from the modified request, in response to mapping the at least one device independent class attribute and the at least one device independent property; and

sending the device specific request to the managed device, wherein a proxy couples a plurality of hosts to a plurality of managed devices that includes the managed device.

13. (Original) The method of claim 11, further comprising:

further modifying the received request to include at least one association between device specific classes in the class hierarchy.

14. (Previously presented) The method of claim 11, wherein the received request indicates the source class and the requested class, the method further comprising:

determining one specific association between a first device specific class that corresponds to the source class and a second device specific class that corresponds to the specific class, wherein the one specific association corresponds to the managed device.

15. (Previously presented) The method of claim 11, wherein the source class represents storage pools and the requested class represents storage volumes corresponding to a storage pool.

16. (Previously presented) The method of claim 11, wherein the received request indicates the source class and the base association, the method further comprising:

determining a first device specific class from the class hierarchy database, wherein the first device specific class has one specific association with a second device specific class that corresponds to the indicated source class, and wherein the one specific association corresponds to the base association.

17. (Canceled)

18. (Original) The method of claim 11, wherein the request is received from a Common Information Model application, and wherein the at least one device independent class is specified by a Common Information Model schema.

19. (Original) The method of claim 11, wherein the request comprises a command that is part of an object oriented management schema for managing non-homogeneous devices in a network environment.

20. (Original) The method of claim 19, wherein the management schema comprises the Common Information Model.

21 – 33. (Canceled)

34. (Previously presented) The method of claim 11, wherein the managed device is coupled to a proxy, wherein the proxy is a computational device, and wherein the receiving, the traversing, the modifying and the generating are performed by the proxy.

35. (New) The method of claim 34,
wherein the request is received at the proxy from a Common Information Model (CIM) application, and wherein the request is implemented via CIM classes; and
wherein the traversing of the class hierarchy database is performed by a traversal application in a CIM Object Manager (CIMOM) of the proxy to determine all specific subclasses of a CIM superclass that has a specific class corresponding to the managed device.

36. (New) A computer readable storage medium, wherein code stored in the computer readable storage medium when executed by a processor causes operations, the operations comprising:

- receiving a request implemented via at least one device independent class;
- traversing a class hierarchy database to determine at least one device specific class that corresponds to the at least one device independent class, wherein the class hierarchy database stores a class hierarchy and associations between classes;

modifying the received request, wherein in the modified request the least one device independent class has been translated to the at least one device specific class;
generating a device specific request in a device specific language; and
sending the device specific request in the device specific language to a managed device,
wherein

(i) in the class hierarchy database, a first base class at a higher level in the class hierarchy is connected to a second base class and a third base class that are at a lower level in the class hierarchy, wherein the second and third base classes are connected via a base association;

(ii) in the class hierarchy database, the second base class is connected to a first specific class that corresponds to the first base class, the third base class is connected to a second specific class that corresponds to the second base class, wherein the first specific class and the second specific class are connected by a specific association;

(iii) in response to a request for specific association instances based on providing a source class corresponding to the second base class and a requested class corresponding to the third base class, deriving one class supported by the managed device via the specific association.

37. (New) The computer readable storage medium of claim 36, the operations further comprising:

mapping at least one device independent class attribute to at least one device specific class attribute in the modified request;

mapping at least one device independent property to at least one device specific property in the modified request;

generating the device specific request from the modified request, in response to mapping the at least one device independent class attribute and the at least one device independent property; and

sending the device specific request to the managed device, wherein a proxy couples a plurality of hosts to a plurality of managed devices that includes the managed device.

38. (New) The computer readable storage medium of claim 36, the operations further comprising:

further modifying the received request to include at least one association between device specific classes in the class hierarchy.

39. (New) The computer readable storage medium of claim 36, wherein the received request indicates the source class and the requested class, the operations further comprising:
determining one specific association between a first device specific class that corresponds to the source class and a second device specific class that corresponds to the specific class, wherein the one specific association corresponds to the managed device.

40. (New) The computer readable storage medium of claim 36, wherein the source class represents storage pools and the requested class represents storage volumes corresponding to a storage pool.

41. (New) The computer readable storage medium of claim 36, wherein the received request indicates the source class and the base association, the operations further comprising:
determining a first device specific class from the class hierarchy database, wherein the first device specific class has one specific association with a second device specific class that corresponds to the indicated source class, and wherein the one specific association corresponds to the base association.

42. (New) The computer readable storage medium of claim 36, wherein the request is received from a Common Information Model application, and wherein the at least one device independent class is specified by a Common Information Model schema.

43. (New) The computer readable storage medium of claim 36, wherein the request comprises a command that is part of an object oriented management schema for managing non-homogeneous devices in a network environment.

44. (New) The computer readable storage medium of claim 43, wherein the management schema comprises the Common Information Model.

45. (New) The computer readable storage medium of claim 36, wherein the managed device is coupled to a proxy, wherein the proxy is a computational device, and wherein the receiving, the traversing, the modifying and the generating are performed by the proxy.

46. (New) The computer readable storage medium of claim 45,
wherein the request is received at the proxy from a Common Information Model (CIM) application, and wherein the request is implemented via CIM classes; and
wherein the traversing of the class hierarchy database is performed by a traversal application in a CIM Object Manager (CIMOM) of the proxy to determine all specific subclasses of a CIM superclass that has a specific class corresponding to the managed device.

47. (New) A system for managing devices, the system comprising:
a memory;
a processor coupled to the memory, wherein the processor performs operations, the operations comprising:
receiving a request implemented via at least one device independent class;
traversing a class hierarchy database to determine at least one device specific class that corresponds to the at least one device independent class, wherein the class hierarchy database stores a class hierarchy and associations between classes;
modifying the received request, wherein in the modified request the least one device independent class has been translated to the at least one device specific class;
generating a device specific request in a device specific language; and
sending the device specific request in the device specific language to a managed device,
wherein

(i) in the class hierarchy database, a first base class at a higher level in the class hierarchy is connected to a second base class and a third base class that are at a lower level in the class hierarchy, wherein the second and third base classes are connected via a base association;

(ii) in the class hierarchy database, the second base class is connected to a first specific class that corresponds to the first base class, the third base class is connected to a

second specific class that corresponds to the second base class, wherein the first specific class and the second specific class are connected by a specific association;

(iii) in response to a request for specific association instances based on providing a source class corresponding to the second base class and a requested class corresponding to the third base class, deriving one class supported by the managed device via the specific association.

48. (New) The system of claim 47, the operations further comprising:
mapping at least one device independent class attribute to at least one device specific class attribute in the modified request;
mapping at least one device independent property to at least one device specific property in the modified request;
generating the device specific request from the modified request, in response to mapping the at least one device independent class attribute and the at least one device independent property; and
sending the device specific request to the managed device, wherein a proxy couples a plurality of hosts to a plurality of managed devices that includes the managed device.

49. (New) The system of claim 47, the operations further comprising:
further modifying the received request to include at least one association between device specific classes in the class hierarchy.

50. (New) The system of claim 47, wherein the received request indicates the source class and the requested class, the operations further comprising:
determining one specific association between a first device specific class that corresponds to the source class and a second device specific class that corresponds to the specific class, wherein the one specific association corresponds to the managed device.

51. (New) The system of claim 47, wherein the source class represents storage pools and the requested class represents storage volumes corresponding to a storage pool.

52. (New) The system of claim 47, wherein the received request indicates the source class and the base association, the operations further comprising:

determining a first device specific class from the class hierarchy database, wherein the first device specific class has one specific association with a second device specific class that corresponds to the indicated source class, and wherein the one specific association corresponds to the base association.

53. (New) The system of claim 47, wherein the request is received from a Common Information Model application, and wherein the at least one device independent class is specified by a Common Information Model schema.

54. (New) The system of claim 47, wherein the request comprises a command that is part of an object oriented management schema for managing non-homogeneous devices in a network environment.

55. (New) The system of claim 54, wherein the management schema comprises the Common Information Model.

56. (New) The system of claim 47, wherein the managed device is coupled to a proxy, wherein the proxy is a computational device, and wherein the receiving, the traversing, the modifying and the generating are performed by the proxy.

57. (New) The system of claim 56,
wherein the request is received at the proxy from a Common Information Model (CIM) application, and wherein the request is implemented via CIM classes; and
wherein the traversing of the class hierarchy database is performed by a traversal application in a CIM Object Manager (CIMOM) of the proxy to determine all specific subclasses of a CIM superclass that has a specific class corresponding to the managed device.